

CLAIMS

1. An assembly device for at least two laminated glazing elements (1, 2) each consisting of several  
5 individual glazing elements (1.1 to 1.4, 2.1 to 2.4) which are rigid and assembled to one another at the surface by means of bonding layers, which succeed one another in a direction of extension, partially overlapping in contiguous edge regions  
10 in perpendicular projection on the faces of the glazing elements, and are assembled to one another in this limited overlap region (3) on the edge side, characterized in that only one portion of the rigid glazing elements, at least one  
15 individual glazing element (1.1, 1.2, 2.1, 2.2) of each laminated glazing element (1, 2), extends into the overlap region (3).
2. The assembly device as claimed in claim 1,  
20 characterized in that the thickness of the overlap region (3), defined by the thicknesses of the individual glazing elements (1.1, 1.2, 2.1, 2.2) extending into the latter and where necessary of at least one intermediate layer (7), does not  
25 exceed in total the thickness of an individual laminated glazing element (1, 2).
3. The assembly device as claimed in claim 1 or 2,  
30 characterized in that each laminated glazing element (1, 2) has rims edge to edge (1K, 1K', 2K, 2K') contiguous in the overlap region (3) and offset one from the other in the direction of extension.
- 35 4. The assembly device as claimed in any one of the preceding claims, characterized in that each laminated glazing element (1, 2) comprises in the edge region at least one individual glazing element which protrudes with one projecting rim

(1K, 2K) and at least one individual glazing element with one recessed rim (1K', 2K').

5. The assembly device as claimed in claim 4, in which one projecting rim (1K, 2K) and/or one recessed rim (1K', 2K') belongs in common to several individual glazing elements (1.1, 1.2; 2.1, 2.2; 1.3, 1.4; 2.3, 2.4) assembled to one another at the surface.
10. The assembly device as claimed in claim 4 or 5, characterized in that, when looking in the direction of extension, a projecting rim (1K, 2K) of a second laminated glazing element each time follows a recessed rim (1K', 2K') of a first laminated glazing element.
15. The assembly device as claimed in claim 4 or 5 or 6, in which two rims offset relative to one another (1K, 1K'; 2K, 2K') form a staggered formation on the side of the edge of the laminated glazing element (1, 2).
20. The assembly device as claimed in claim 4 or 5 or 6, in which, on one laminated glazing element, there are provided at least two projecting rims and at least one recessed rim situated between the latter and on the other laminated glazing element at least one projecting rim and at least two recessed rims, in which the laminated glazing elements comprise at least three individual glazing elements.
25. The assembly device as claimed in any one of the preceding claims, characterized in that, in the overlap region (3), at least one mechanical assembly member (5) combining the successive laminated glazing elements (1, 2) is provided.

10. The assembly device as claimed in any one of the preceding claims, characterized in that, in the overlap region (3), one intermediate bonding layer is provided between the faces of two successive  
5 laminated glazing elements.
11. The assembly device as claimed in any one of the preceding claims, characterized in that, in the overlap region (3) of the laminated glazing  
10 elements (1, 2), at least one through-hole (6) passing through the latter is provided for the insertion and/or fixing of a mechanical assembly member (5).
- 15 12. The assembly device as claimed in claim 11, characterized in that the assembly member (5) comprises means for centering its longitudinal axis passing through the laminated glazing elements in the through-hole.  
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13. The assembly device as claimed in claim 12, characterized in that the assembly member (5) is centered fixedly on the axis of a hole of a first individual glazing element (1.2) of a first  
25 laminated glazing element (1), and in that it comprises means (eccentric rings 16.1, 16.2) of compensating for off-center positionings of a hole of a second individual glazing element (2.2), belonging to another laminated glazing element (2)  
30 outside said axis.
14. The assembly device as claimed in claim 13, characterized in that the assembly member comprises at least one rod or one sleeve (8) able  
35 to be inserted in the through-hole (6), one centering ring (15) surrounding the rod or the sleeve in precise adjustment and able to be adjusted in a hole of an individual glazing element, and at least one eccentric ring,

- 5           preferably two eccentric rings (16.1, 16.2) able to rotate relative to one another, which, on the one hand, also surround the rod or the sleeve in precise adjustment and, on the other hand, can also be adjusted in a hole of another individual glazing element.
- 10          15. The assembly device as claimed in any one of claims 11 to 14, characterized in that the assembly member (5) comprises end washers (10, 13) to mask the through-hole on the outside.
- 15          16. The assembly device as claimed in claims 14 and 15, characterized in that the end washers (10, 13) may be tightened, in particular screwed, with the rod or the sleeve (8), in which device the rod or the sleeve (8) is immobilized in its axial direction in the through-hole after the tightening or screwing of the two end washers.
- 20          17. The assembly device as claimed in claim 15 or 16, characterized in that the end washers (10, 13) are applied flat, preferably with intermediate shims (11, 14), on the outer faces of the laminated glazing elements (1, 2) about the exits of the through-hole (6).
- 25          18. The assembly device as claimed in any one of claims 11 to 17, characterized in that, after the insertion and/or installation of the assembly member (5) in the through-hole (6), the remaining hollow spaces are filled with a mass of filler.
- 30          19. The assembly device as claimed in claim 18 and any one of claims 15 to 17, characterized in that the end washers (10, 13) comprise orifices (17) for the insertion of the mass of filler.
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20. The assembly device as claimed in claim 19,  
characterized in that the end washers also  
comprise orifices (18) to discharge the air  
displaced by the inserted mass of filler.

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21. The assembly device as claimed in any one of the  
preceding claims, characterized in that at least  
the individual glazing elements extending into the  
overlap region are made of partially prestressed  
10 or prestressed glass.

22. A construction module, in particular a  
reinforcement element (glass stringer) for glazed  
façades, consisting of at least two laminated  
15 glazing elements assembled to one another with the  
aid of one or more assembly members as claimed in  
any one of the preceding claims.

23. A façade consisting of a plurality of glass  
20 glazing elements attached to a framework, while  
being situated in a plane, which is reinforced  
transversely on this plane against acting forces  
by at least one construction module as claimed in  
claim 22.